ITEM 3

DEMAND RESPONSE POLICY WORKING GROUP

GOAL SETTING (AGENDA ITEM 2: PUC CONTRIBUTION)

1. Clarification of Proceeding Scope: Program/Tariff Types

Customer sector	**Short-term** ⟷ **Long-term**		
	Emergency	**Flexible/ Dispatchable**	**Permanent**
Residential	• Direct load control (air conditioners, water heaters, pool pumps)	• Programmable / smart thermostats • Time of Use (TOU) rates • *Critical peak pricing*	• Efficiency investment (appliances, building upgrades, etc.)
Small commercial	• Direct load control (air conditioners, water heaters)	• Programmable / smart thermostats • TOU rates • Energy management control systems (EMCS) • Demand bidding • *Critical peak pricing*	• Efficiency investment (appliances, building upgrades, etc.)
Medium-large commercial	• Direct load control (air conditioners, water heaters) • Interruptible rates	• Programmable / smart thermostats • TOU rates • Real-time rates • *Critical peak pricing* • EMCS • Demand bidding	• Efficiency investment (appliances, building upgrades, etc.)
Industrial	• Interruptible rates • Direct load control (pumping)	• TOU rates • Real-time rates • EMCS • Demand bidding • *Critical peak pricing*	• Efficiency investment (equipment, process improvement)
Agricultural	• Interruptible rates • Direct load control (pumping)	• TOU rates • Real-time rates • Demand bidding • *Critical peak pricing*	• Efficiency investment (equipment, process improvement)

2. Paradigms for Approaching Demand Response

Resource Planners' Approach

- Set a quantitative goal
- Design programs to achieve the goal
- Make roles and responsibilities clear for achieving goal
- Set metrics for determining whether the goal has been reached
- Set of a system of penalties and rewards (for utilities or other implementers) to encourage reaching the goal

Economists' Approach

- "Get the prices right:" ensure that customers see and can react to the real costs of energy
- Give consumers technology that supports the appropriate tariffs
- No need to set resource goals; demand responsiveness will naturally occur at whatever level is economic for individual consumers

3. Possible Analytical Approach to Setting a Resource Planning Goal

Top-down:

- Total IOU Summer peak demand
- Total direct access peak load
- Total interruptible resources: do these overlap with or will they be replaced by flexible demand response programs over time?
- Total peak load by customer class

- Average customer peak demand reduction through various strategies (using experience from other states):
  - Critical peak pricing
  - Real-time pricing
  - Time of use pricing
  - Demand bidding
  - Smart thermostats
  - Direct load control
  - Metering technology alone

Bottom up:

- Demand response resource potential by:
  - Technology
  - Customer class
  - Program offering
  - Tariff structure